




# Magazine 1A – Environmental Health Officers

This document provides a transcript for the audio in Magazine 1A – Environmental Health Officers. It includes a text copy for interviews, presenter videos and activity audio.

Slide Image	Transcript
	<p>WORKING WITH COUNTRY Issue 1</p> <p>ENVIRONMENTAL HEALTH OFFICERS</p> <p>Protecting rivers and creeks</p> <p>+ How to test water</p> <p>Meet Michayla and Julie</p>
	<p>Welcome to Issue 1 of Working with Country</p> <p>Presenter, Introduction to Environmental Health Officer 0.34 minutes</p> <p><i>Welcome to PreVET.</i></p> <p><i>Hi. You'll be meeting people who keep plants, animals and other people safe. This is called being an 'environmental health officer'.</i></p> <p><i>In this issue, you'll be meeting three people who work in a mine.</i></p> <p><i>Richard, Julie and Michayla all look after their country. They know how to test water to identify changes in it.</i></p>
	<p>Interviews with Environmental Health Officers Water Management Trainee, Richard Lindner,</p> <p>2:20 minutes : Richard Lindner, Water Management Trainee, West Arnhem Region.</p> <p><i>How's it going? My name is Richard Lindner. I work at ERA, and I work in</i></p>

*the Water Management department.*

*On a daily basis we come to many sites like these. This is GC2, and we just come and collect samples on a daily basis and send them off to the lab in Darwin for analysis.*

*Well, this is a lab. This is where we get all our samples, and this is where all the equipment we need to go sampling the water. Over here, these are the bottles we use. Each tests for different substances in the water.*

**Screen text: Why is literacy and numeracy important in Richard's job?**

*Well, literacy is important in this area because water sampling doesn't involve just sampling water—it involves a lot of paperwork that goes with it. Because we gotta write the data and then we gotta log them on into the computer so we can compare it with other readings over the past years and make sure it's stabilising.*

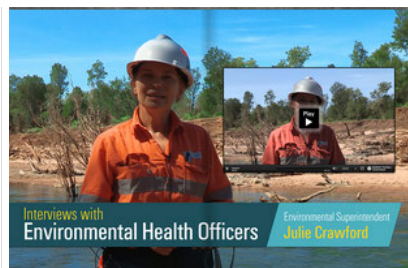
*Numeracy is important because you have to be able to understand the readings we get and transfer them into data. You're not gonna have every sump reading the same readings. You're gonna have a different pH and EC, and you have to take note of that.*

**Screen text: What are some key things to becoming a successful worker?**

*Well, the key things that a young person needs to become a successful worker is you've gotta have a positive attitude—you don't want to come to work negative and, like, you don't want to do things. You need to come in ready to go. You want to get work done. You want to come to work on time and also just helping out; you can always lend a hand to someone who needs a hand—if not, always ask.*

**Screen text: Why does Richard like his job?**

*In the work industry you make 'mates for life'. You know, they could be there when you're feeling low. And also, working here, I mean, it's pretty good pay, like, in the mine, so you can get the things you really want if you save up.*



Interviews with Environmental Health Officers  
Environmental Superintendent, Julie Crawford

1.49 minutes: Julie Crawford, Environmental Superintendent, Gulf Region

*Hi, I'm Julie Crawford. I'm the Environmental Superintendent here at McArthur River Mine.*

*We have a fairly extensive water quality monitoring program, which we use our environmental trainees to participate in.*

*In collecting the water samples, it gives us an idea of what the actual quality of the water is. We need to make sure that it's safe for people to drink, for the animals that come to drink the water and also to the animals that live within the water.*

*Other areas that the environmental technicians do is collect dust samples and also soil samples. And not only here at McArthur River itself, we also go down to the marine environment at Bing Bong, where they look at sea water and sea sediment and the sea animals as well.*

**Screen text: What is tested in the water?**

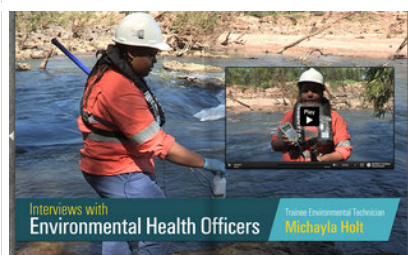
*Some of the things that we actually test are pH—that gives us an idea of whether the water is acid or whether it is alkaline. We're hoping to have it fairly neutral, which makes it, again, good drinking water.*

*The other thing that we look at is on this meter here is called EC, or electrical conductivity. That gives us an idea of the amount of salts that are in the water.*

*After we collect the data and we write that down or we collect the information from the sampling that we take, we have to go back and do some office work where we put that information into a computer so that we know what we're actually collecting is giving us good information so that we know that we have actually got a healthy environment.*

Interviews with Environmental Health Officers  
Trainee Environmental Technician, Michayla Holt

0.57 minutes: Michayla Holt, Trainee Environmental Technician, Gulf Region



*Hello, my name is Michayla. I'm a trainee environmental technician.*

*In my job, we have to wear our safety gear: our hard hat, sunglasses, life jacket, long-sleeved shirt and our boots.*

*This is a 'mighty gripper'. We use the mighty gripper to hold the sample bottle.*

*And that's how we collect a water sample safely.*

ACTIVITIES Signs in the workplace

Presenter, introduction to activities  
0.25 minutes

*Now you'll see what skills Julie, Richard and Michayla use every day to be environmental health officers.*

*They talk about what skills they need in their jobs.*

*They take samples so the mines can make good decisions about looking after the environment.*

*There are so many things they needed to learn to become environmental health officers.*

*Let's have a look!*



SIGNS

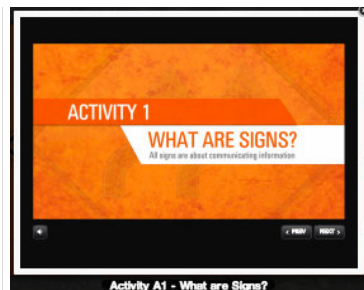
What are signs - All signs are about communicating information.

Signs in Richard's lab - Now let's do an activity based on Richard's work.

Signs in the workplace - Now let's do an activity based on different signs.

## Slide Image

## Activity A1 What Are Signs?



ACTIVITY 1 What are signs?

*What are signs?*



Key Point

This activity will focus on:

- Understanding different types of signage.

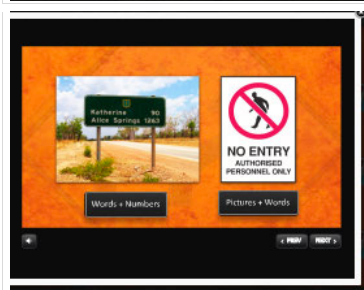


*Signs communicate information.*

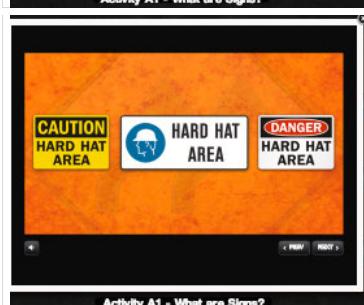
*Some signs have only pictures.*

*Some signs have only numbers.*

*And other signs, only words.*



*Some signs have words and numbers, or pictures and words.*

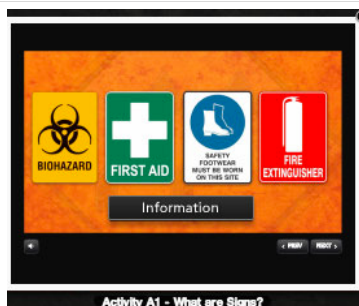


*Some signs say the same thing but look different.*

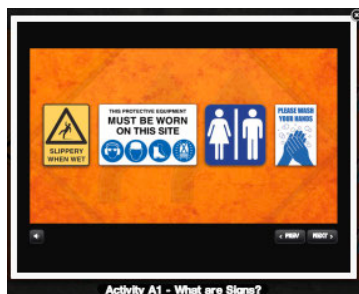




*Signs can be all different shapes and different colours.*



*But they all tell you information.*



*Signs tell you to be careful, and they tell you how to stay safe.*

*They help you find things and help you to do things.*

*It's all important information.*



*We need signs to give us information.*

*This sign tells you it is 90km to Katherine and 1263km to Alice Springs.*

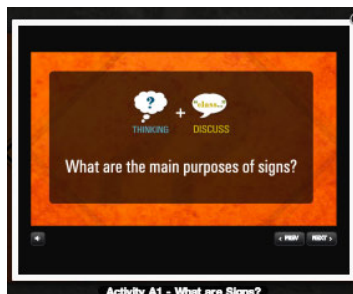
*There is also a 1 on the sign, which tells you that you are on Highway Number 1.*



*If signs looked like this you wouldn't know where you were going. You might go in the wrong direction, drive for days and run out of fuel.*



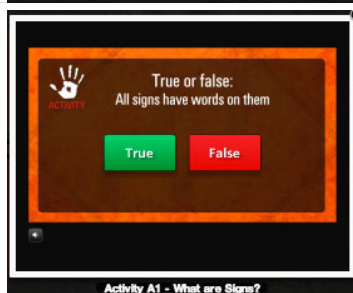
*If signs looked like this you might think you were close to Katherine and Alice Springs was also close.*



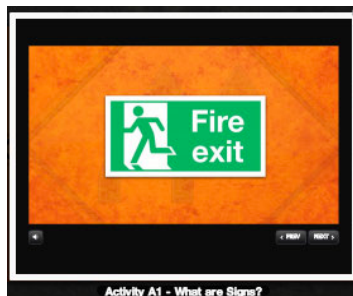
Thinking + Discuss  
What are the main purposes of signs?

*Let's have some thinking time.*

*Think of one thing that signs do.*



Activity  
True or false: all signs have words on them.



*We need signs to keep us safe at school and in the workplace.*

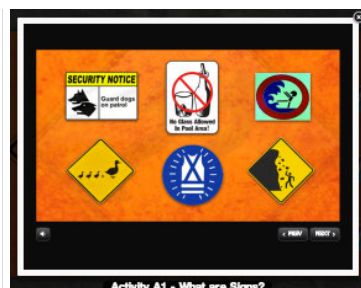
*This sign tells you the way out if there is a fire in the building.*

*If you didn't see the sign, you might not know how to get out of the building if there is a fire.*



*Signs are there to give us information.*

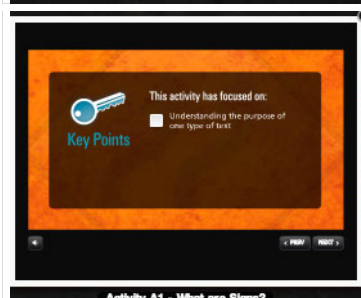
*If you don't understand a sign, ask someone to explain it to you.*



Class Discuss

*Here are some signs for you to work out what information they contain and what might happen if we didn't see the sign.*

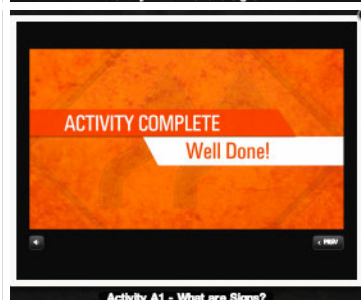
*Have a go at saying what they might be telling you.*



Key Points

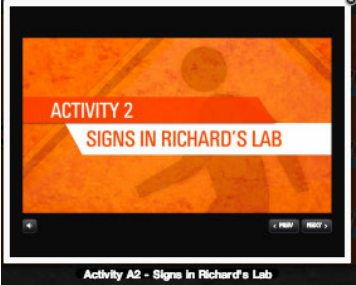
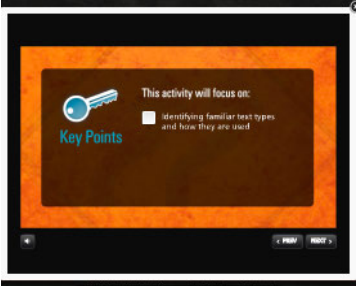


This activity has focussed on:

- Understanding different types of signage



Activity complete. Well done!

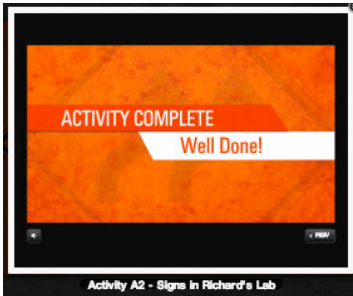


Slide Image	Activity A2 Signs In Richard's Lab
 	<p>ACTIVITY 2 Signs In Richard's Lab</p> <p><i>Let's look at the signs in Richard's lab.</i></p> <p>Key Points This activity will focus on:</p> <ul style="list-style-type: none"> <li>Understanding a range of safety signs in the workplace</li> </ul>
	<p>Richard, Water Management Trainee 0.38 minutes</p> <p><i>My name's Richard Lindner, and I've been working at the mine for the Water Management department for about 11 months now.</i></p> <p><i>We sample all the sites around the mine to make sure none of it goes around the waterways around the mine.</i></p> <p><i>Water's the number one environmental hazard at the mine here cos we have a fair bit of water during the wet season, and all the waterways connect up to all the creeks and the rivers and they all go through the floodplains and we want to protect that.</i></p>
	<p>Select the signs you remember seeing.</p> <p><i>So, now you've seen the video, how many signs do you remember seeing?</i></p>


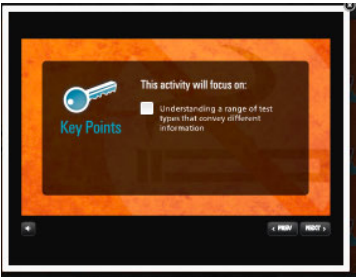





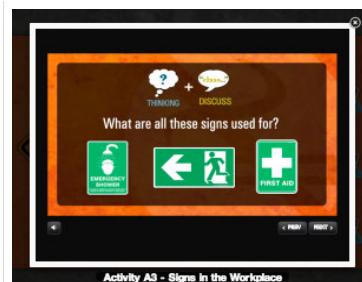
Key Points  
This activity has focussed on:

- Understanding a range of safety signs in the workplace



Activity complete. Well done!

Slide Image	Activity A3 Signs In The Workplace
	<p>ACTIVITY 3 Signs in the Workplace</p> <p><i>We are going to introduce you to some types of signs that you will see at school, in the community and at work.</i></p> <p><i>These are all based on 'Australian Standards'.</i></p> <p><i>You will be asked to remember some of them.</i></p>
	<p>Key Points</p> <p>This activity will focus on:</p> <ul style="list-style-type: none"> <li>Understanding a range of signs for the workplace</li> </ul>
	<p><i>To help you remember the different signs, look at their colours, shapes or pictures.</i></p> <p><i>This will give you a hint and help you figure out what you should do if you see one.</i></p>
	<p>Thinking + Discuss</p> <p>What do all these signs have in common?</p>
	<p>Activity</p> <p>What do all these signs have in common?</p> <ul style="list-style-type: none"> <li>Arrows</li> <li>The main background colour is green</li> <li>Exit</li> <li>First Aid Symbol</li> </ul>



Thinking + Discuss  
What are these signs used for?



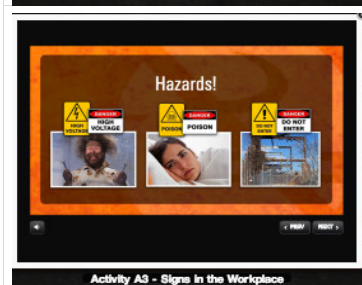
*These signs are used to help people in emergencies.*



Emergency Information Signs

*Emergency information signs show us where to find the exits in case we have to leave the building in a hurry, first aid if someone was hurt and safety equipment, too.*

*It's the official standard for these signs to be in green with white writing.*



Hazards!

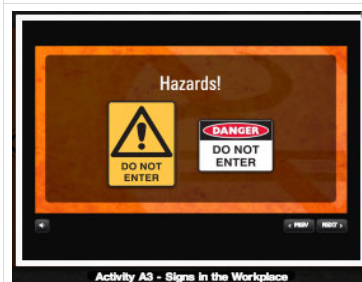
*Let's have a look at a new type of sign.*

*A 'hazard' is something that will hurt you if you're not careful. You may even get killed!*

*So these signs are very important.*

*If you don't follow the directions on these signs, you might get electrocuted or poisoned!*

*Sometimes it's just better to warn people not to enter the area at all.*



Hazards!

*Hmmm...this is interesting.*

*Both of these signs say 'do not enter'.*

*So why do they look different?*



Hazards!

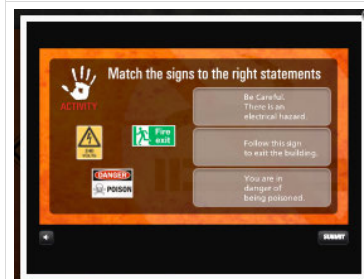
*The yellow sign warns you to be careful. And it is called a 'warning' sign.*

*But—a 'danger' sign is used when your life is in danger!*



Hazards!

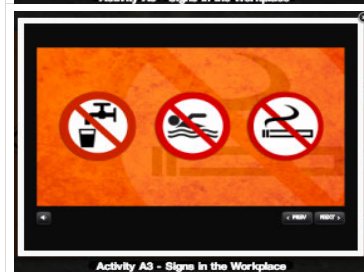
*There are lots of different danger and warning signs.*



Activity

*Let's see what you can remember so far.*

*Match the signs to the right statement.*



*Have a look at these signs. What are they telling us?*

*They say what you are NOT allowed to do.*

*These signs say: 'you cannot drink this water', 'you cannot swim here' and 'you cannot smoke here'.*

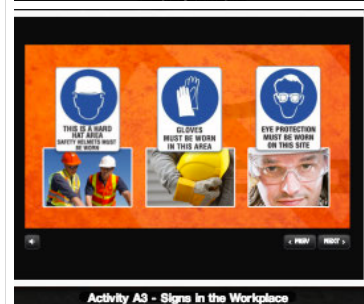


*These signs are used when it's really important that something should NOT be done.*

*This sign instructs you NOT to smoke.*

*It is very dangerous to smoke a cigarette near a petrol pump as you might cause an explosion. You would also be breaking the law.*

*This last set of signs tell you what you MUST do, and are found in workplaces.*



*The instructions protect your life and safety.*

*Following the instructions on these signs is the law.*



*If you don't do what these signs tell you, it could result in injury, sickness, losing your job or having to pay a fine.*



Match the sign to the situation

*In what situations do you have to follow these instructions?*



*Let's go over the five different kinds of signs you should remember.*

*Emergency and exit signs.*

*Warning and danger signs.*

*Signs that tell you what NOT to do.*

*And signs that tell you what you MUST do.*

*For more information about the types of signs visit:*

<http://www.masterbuilders.asn.au/health-safety-and-environment/site-signage>



Activity

Put the signs in order from emergency, warning and hazard signs to signs that you must follow.



Activity

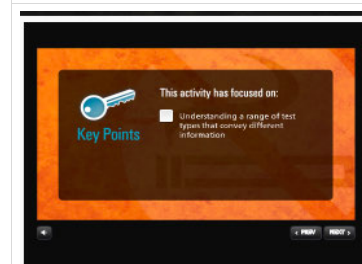
Sort the signs into hazard signs and non-hazard signs.



Thinking + Discuss

If a friend of yours was not wearing a hardhat in an area with this sign, what do you think might happen?

What would you do?



Key Points

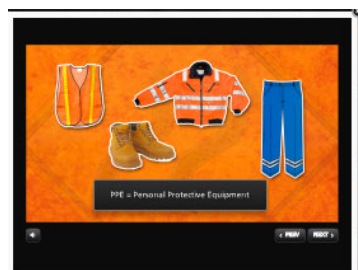
This activity has focussed on:

- Understanding a range of signs for the workplace.



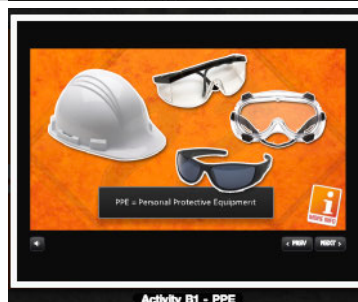
Activity complete. Well done!

Image	Activity B1 Personal Protective Equipment
	<p>Water sampling</p> <p>Personal Protective Equipment - Now let's do an activity based on Michayla's work.</p> <p>Following a process - Now let's do an activity based on Richard's work.</p> <p>Filling out forms - Now let's do another activity based on Richard's work.</p>
	<p>ACTIVITY B1</p> <p>Personal Protective Equipment</p> <p>What is Personal protective Equipment?</p> <p><i>In this clip, we'll be showing you the safety gear Michayla uses.</i></p> <p><i>It's called 'Personal Protective Equipment', or PPE.</i></p>
	<p>Key Points</p> <p>This is what we will learn:</p> <ul style="list-style-type: none"> <li>What kinds of PPE are there and why are they needed in the workplace?</li> </ul>
	<p>Michayla, Trainee Environmental Technician</p> <p>0.32 minutes</p> <p><i>Hello, my name is Michayla. I'm a trainee environmental technician.</i></p> <p><i>In my job, we have to wear our safety gear: our hard hat, sunglasses, life jacket, long-sleeved shirt and our boots.</i></p> <p><i>This is a 'mighty gripper'. We use the mighty gripper to hold the sample bottle.</i></p> <p><i>And that's how we collect a water sample safely.</i></p>



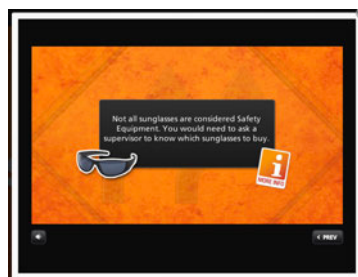
PPE = Personal Protective Equipment

*PPE is the name of the clothes and tools you would use to do your job safely and effectively.*



PPE = Personal Protective Equipment

*It also includes hardhats to protect your head and safety goggles and glasses to protect your eyes.*



More Info

Not all sunglasses are considered 'safety equipment'. You would need to ask a supervisor to know which sunglasses to buy.



PPE = Personal Protective Equipment

*Earmuffs and ear plugs protect your hearing.*

*Gloves protect your hands and the materials you work with.*



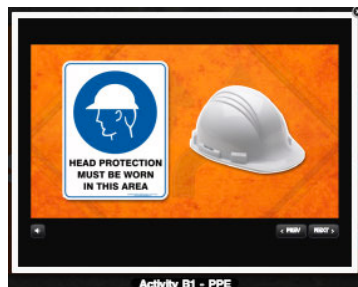
More Info

Tools like the mighty gripper protect you by helping you reach further. What might happen if you were leaning out to hold the sample bottle into the river?



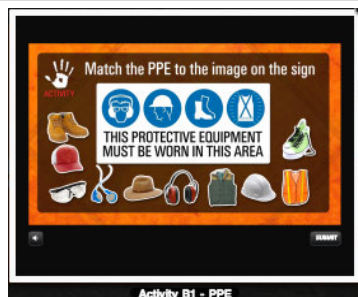
PPE = Personal Protective Equipment

*Closed shoes protect your feet and reflective clothing helps other people to see you.*



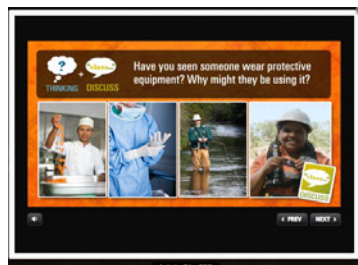
*Signs like this tell us which PPE is needed.*

*They are a part of the health and safety laws, which make sure that employees are safe.*



Activity

Match the PPE to the image on the sign



Thinking + Discuss

What examples of PPE have you seen or used? Why were they important?

*Different jobs require different PPE.*

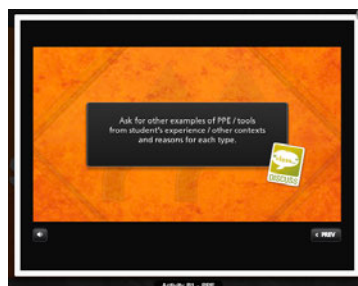
*Audio button - Someone who works in a kitchen needs to keep their hair out of the way, or it may end up in your food!*

*Audio button - Nurses and doctors wear gloves and masks to keep germs from spreading.*

*Audio button - This person fishing wears a waterproof jacket to keep himself dry. He wears sunglasses to protect his eyes from the sun reflecting off the water.*

*Audio button - Michayla needs special PPE in her job as an environmental officer.*





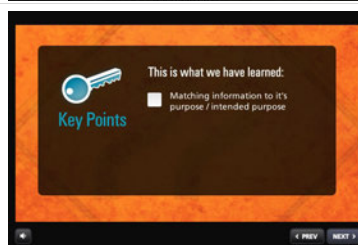
Discuss  
Ask for other examples of PPE/tools from students' experiences/other contexts and reasons for each type.



Activity  
Match the PPE to the risk it's meant to prevent

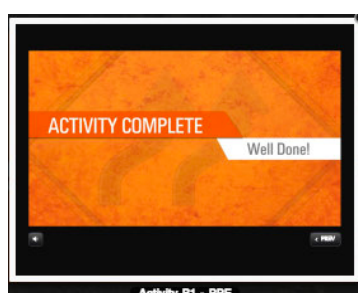


Thinking + Discuss  
*Now that you've learned about PPE, have a think about what other PPE you've seen people using and why they use it.*  
*How would you feel about wearing it?*


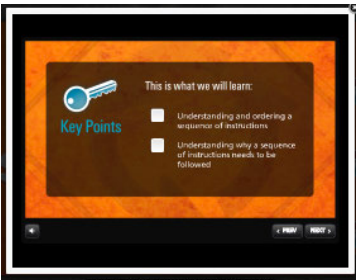
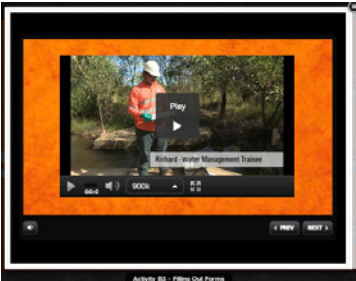


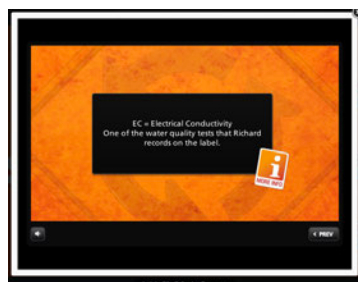
Key Points  
This is what we have learnt:  

- The kinds of PPE that are used and why are they needed in the workplace.



Activity complete. Well done!

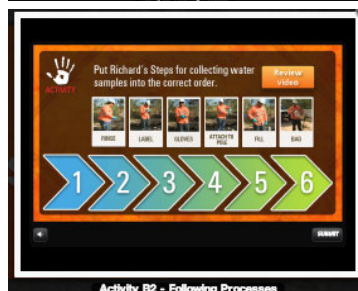
Image	Activity B2 Following Processes
	<p>ACTIVITY B2 Following Processes</p> <p><i>A process is a set of steps you have to go through to get something done.</i></p> <p><i>You followed a process to get to school today, and Richard follows a process when he takes a water sample in this clip.</i></p>
	<p>Key Points</p> <p>This is what we will learn:</p> <ul style="list-style-type: none"> <li>• Understanding and ordering a sequence of instructions</li> <li>• Understanding why a sequence of instructions needs to be followed</li> </ul>
	<p>Richard, Water Management Trainee</p> <p>1.33 minutes</p> <p><i>We wear gloves because we don't want to contaminate the water in the bottle. If we get a contamination of sweat in the water then we could get an 'out' reading...we get a different reading from what the sample site was from before.</i></p> <p><i>So, yeah, we jot down the EC and the sample site so we know where we got the sample from.</i></p> <p><i>Yeah, now we use the pole. You don't wanna put your hands in the water because it can contaminate the water going in the bottle, and also crocodiles and stuff could be in the water, so you don't want your hand bitten off.</i></p> <p><i>After three rinses then we fill the water bottles up and take the sample.</i></p> <p><i>We try not to get as much air in the bottle as possible because if we get air bubbles in there, they could get funny readings when we send them off to Darwin where they get analysed.</i></p> <p><i>It's always important that we put the samples in a bag because we don't want to get any cross contamination with all the other sample sites. So we always have an individual bag for every site.</i></p>



More Info

EC = Electrical Conductivity

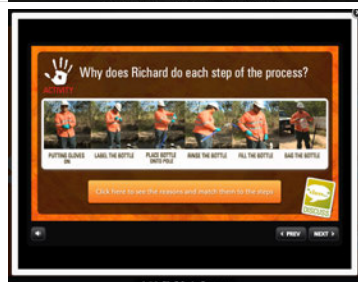
One of the water quality tests that Richard records on the label.



Activity

Put Richard's Steps for collecting water samples into the correct order.

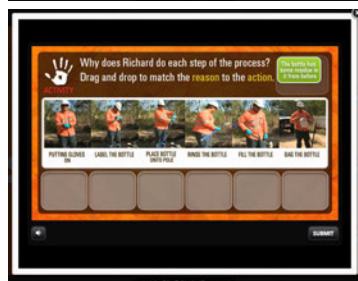
*What does Richard do first, second, third, fourth, fifth, last?*



Activity

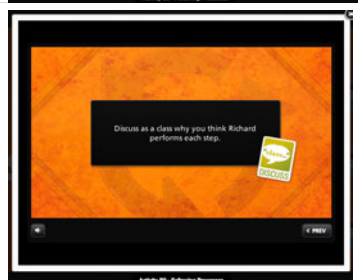
Why do you think Richard does each step of the process?

Click here to see the reasons and match them to the steps.



Why do you think Richard does each step of the process?

Drag and drop to match the reason to the action.



Class Discuss

Why do you think Richard performs each step.



Thinking + Discuss

What processes do students follow in their daily lives? What are the steps involved?

*Nice work!*

*Now you know about processes and how important it is for each step to*

*be followed in order.*

*What do you think about this?*

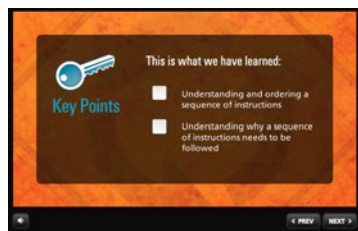
*Share what you know with your mates, and think about how and why you follow processes in your own life.*



Class Discuss

Where does the information go?

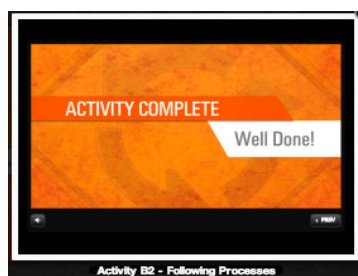
*Click on the pictures to find out where the information goes.*




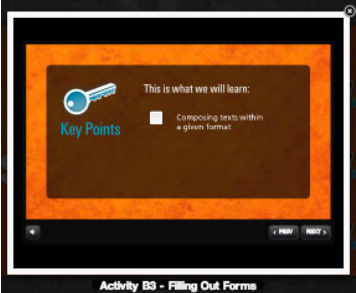
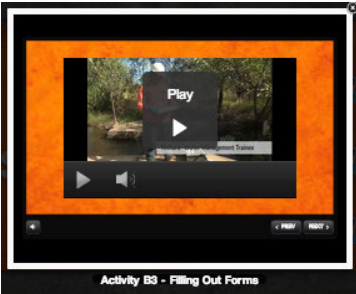
Key Points

This is what we have learnt:

- Understanding and ordering a sequence of instructions
- Understanding why a sequence of instructions needs to be followed



Activity complete. Well done!

Image	Activity B3 Filling Out Forms
 	<p>ACTIVITY B3 Filling Out Forms</p> <p><i>Richard fills out forms in his job.</i></p> <p><i>The forms he fills out are there to record information.</i></p> <p><i>Let's watch the clip and see what he does.</i></p> <p>Key Points</p> <p>This is what we will learn:</p> <ul style="list-style-type: none"> <li>Filling out forms accurately</li> </ul>
	<p>Richard, Water Management Trainee 1.47 minutes</p> <p><i>Yeah, this is the folder where we write down the information that we get off the Horiba.</i></p> <p><i>Take the gloves off because you don't want to wet the paper.</i></p> <p><i>Yeah, basically we just jot down the general information, such as time, the EC, pH and the temperature that we get in the water. And also we jot down the gauge board—always want to know how high the water is and the flow of the creek; if it's flowing hard or if it's flowing slow.</i></p> <p><i>Always make sure you write the date and time, too, when you get the sample.</i></p> <p><i>Yeah, when you're filling out the form, make sure you fill in all the boxes and make sure you fill in the right boxes with the right numbers.</i></p> <p><i>If you accidentally reverse the numbers into a different box or something...these numbers go up in to the <b>LEMS</b>, which is where we enter the data, and if you reverse them, the numbers could be different from last week. Therefore, we'll have a big investigation and you don't want different information because then it'll go to the managers and then the superintendents and they'll find out what's going wrong. They'll say 'we had this number last week for the EC; why do we have this one for this</i></p>



week?’

*Yeah, just when you record your data, always make sure you’re careful and accurate.*

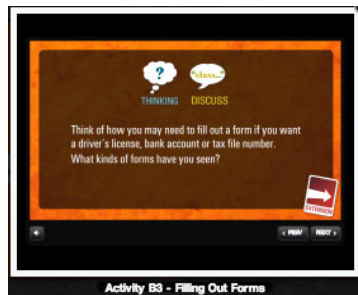
*Forms record all kinds of information and are used for lots of different reasons.*



Thinking + Discuss

*Think of how you may need to fill out a form if you want a driver’s licence, a bank account or a tax file number.*

*What kinds of forms have you seen?*



Extension

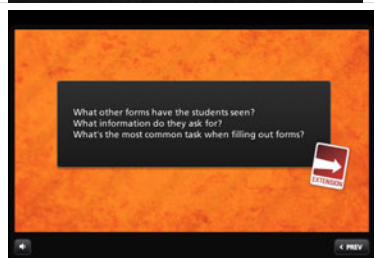
What other forms have the students seen?

What information do they ask for?

What’s the most common task when filling out forms?

*Richard needs to be able to accurately transfer information from the gauge to the form.*

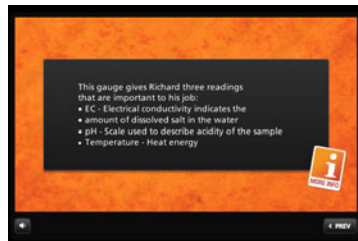
*Move the mouse over the gauge to find out more.*



More info

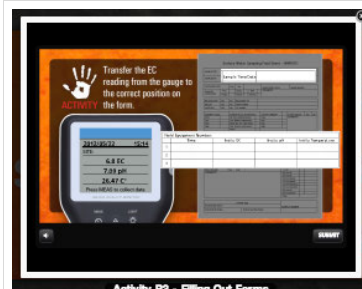
This gauge gives Richard three readings that are important to his job:

- EC - electrical conductivity indicates the amount of dissolved salt in the water
- pH - scale used to describe acidity of the sample
- temperature - heat energy.





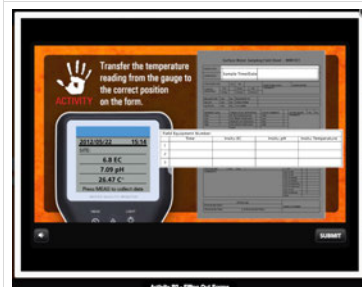
Activity  
Find the date and time on the screen.



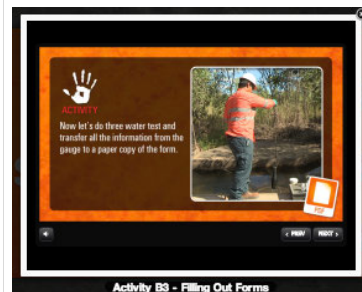
Activity  
Transfer the EC reading from the gauge to the correct position on the form.



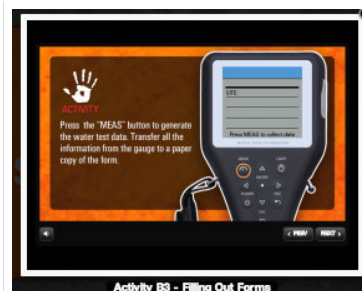
Activity  
Transfer the pH reading from the gauge to the correct position on the form.



Activity  
Transfer the temperature reading from the gauge to the correct position on the form.



Activity  
Now let's do three water tests and transfer all the information from the gauge to a paper copy of the form.



#### Activity

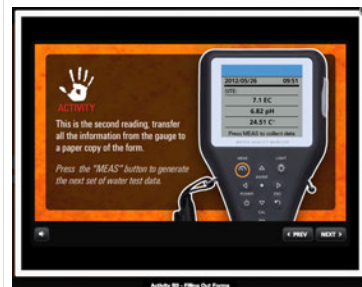
Press the 'MEAS' button to generate the water test data. Transfer all the information from the gauge to a paper copy of the form.



#### Activity

This is the first reading, transfer all the information from the gauge to a paper copy of the form.

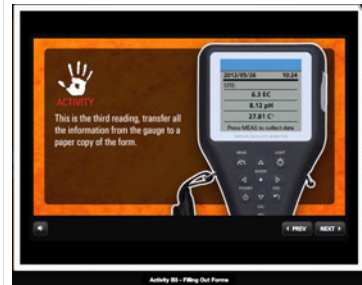
Press the "MEAS" button to generate the next set of water test data.



#### Activity

This is the second reading, transfer all the information from the gauge to a paper copy of the form.

Press the "MEAS" button to generate the next set of water test data.



#### Activity

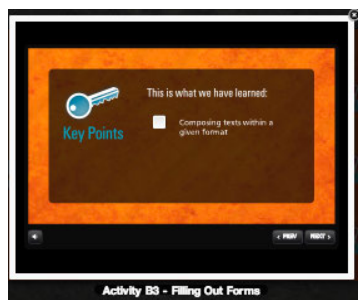
This is the third reading, transfer all the information from the gauge to a paper copy of the form.



#### Thinking + Discuss

*Now that you've had a go at recording information on a form, what do you think about it?*

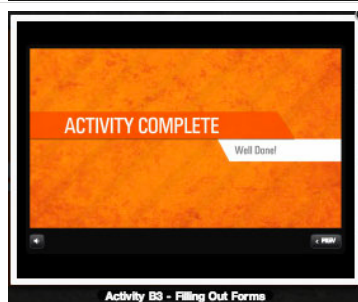
*What do you think about doing this as a process every day?*



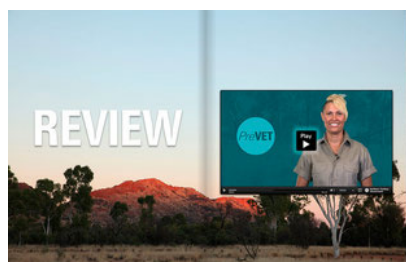
## Key Points

This is what we have learnt:

- Filling out forms accurately



Activity complete. Well done!



Presenter, review  
0.34 minutes

*Nice work!*

*You've just learned a bunch of new things about what environmental health officers do.*

*You've also learnt things you can use in other jobs.*

*You've just learnt about science and PPE, which stands for Personal Protective Equipment.*

*You've learnt about filling out forms and following processes.*

*Would you like to be an environmental health officer?*

Northern Territory Government logo

